**PATENT** 



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re: Attorney Docket No. Lashkarian 2

In re application of: Navid Lashkarian

Serial No.: <u>09/556,858</u>

Filed: <u>04/21/00</u> Matter No.: <u>992.1045</u> Group No.: <u>2637</u>

Examiner: <u>David B. Lugo</u> Phone No.: 571-272-3043

For: Minimum Variance Unbiased and Moment Estimators of Carrier Frequency Offset in Multi-

Carrier Systems

## **INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

In accordance with 37 CFR § 1.56, this is an Information Disclosure Statement (IDS) for the above-captioned U.S. patent application. An IDS Form PTO-1449 listing references is enclosed herewith and forms a part hereof. Submission of references is not an admission that those references are in fact prior art.

## Certification Under 37 CFR § 1.704(d)

[ ] Each item of information contained in this statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of this statement.

## Certification Under 37 CFR § 1.97(e)

[ ] Each item of information contained in this statement was either (1) cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement or (2) not known to any individual designated in § 1.56(c) more than three months prior to the filing of this statement.

Certification Under 37 CFR 1.8

Date of Deposit January 17, 2006.

I hereby certify that this paper and any accompanying papers or fees are being deposited with the U.S. Postal Service with sufficient postage as first class mail under 37 CFR 1.8 on the date indicated above and addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Mary E. Caniz
(Name of person mailing)

Mary E. Cany (Signature of person mailing)

Fee Ui	nder 3/ CFR § 1.9/(c)								
[]	The fee for submission of this IDS under § 1	.97(c) is \$\frac{\$180.00}{}\$ as set forth in \\$ 1.17(p).							
<u>Petitio</u>	on Under 37 CFR § 1.97(d)								
[]	This is a petition requesting consideration of an IDS under § 1.97(d). The petition fee for submission of this IDS under § 1.97(d) is \$180.00 as set forth in § 1.17(p).								
Provis	ion of Copies of References								
[X]	X] A copy of each of the listed references is enclosed herewith and forms a part hereof								
	[ ] A translation of each of Reference(s)	is enclosed herewith and forms a part hereof.							
[]	A copy of the International Search Report from a corresponding PCT application is enclosed herewith.								
[]	A copy of the European Search Report from a corresponding EPO application is enclosed herewith.								
[]	A copy of the final U.S. office action for U.S. patent application no filed on as attorney docket no. (Case name or our ref.).								
[]	The above-captioned U.S. patent application is a  [ ] continuation [ ] divisional [ ] continuation-in-part								
	application of U.S. application serial number, filed on as Attorney Docket No Each of the listed references was previously cited by or submitted to the Office in the prior application. The above-captioned U.S. patent application relies upon the prior application for an earlier filing date under 35 U.S.C. 120. Pursuant to § 1.98(d), copies of the listed references are not being provided with this IDS.								
Autho	rization To Charge Deposit Account								
[X]	Authorization is given to charge <b>Mendelsohn &amp; Associates</b> , P.C. Deposit Account No. 50-0782 for any fee under § 1.97(c) or § 1.97(d).								
form a	It is respectfully requested that the Examine as confirmation that each of the documents ha	r initial and return a copy of the enclosed PTO-1449 s been considered.							
	,	Respectfully submitted,							
Date:	t /17/06	Maa							
Mende 1500 J	mer No. 46900 elsohn & Associates, P.C. John F. Kennedy Blvd., Suite 405 lelphia, Pennsylvania 19102	Kevin M. Drucker Registration No. 47,537 Attorney for Applicant (215) 557-6659							

**Enclosures** 

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RADEMARI		USP		04/21/2000 PATENT DOCUMENTS			2637			
EXAMINER INITIAL	ļ	DOCUMENT NUMBER	DATE		NAME	CLASS	SUBCLASS		FILING DATE IF APPROPRIATE	
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A	С	Zavarsky et al., "Non-Higher Order Moment Estimation Based Method for Detection of Frequency of Signal from its Multiplicatively Corrupted Version", September 1995, Electronics Letters, Vol. 31, Issue 19, pp. 1632-34.								
A	D	Lashkarian et al., "Minimum Variance Unbiased Estimation of Frequency Offset in OFDM Systems, a Blind Synchronization Approach", June 2000, IEEE, ICASSP, Vol. 5, pp. 2945-48.								
A	E	Lashkarian et al., "Class of Cyclic-Based Estimators for Frequency-Offset Estimation of OFDM Systems", December 2000, IEE Transactions on Communications, Vol. 48, Issue 12, pp. 2139-49.								
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EXAMINER DATE CONSIDERED